

200-997023
15 May 1967
552-552A-OD-328

PROGRESS REPORT - 552 and 552A

For April 1967

552 #101

Several trips were made in April to attack and solve remaining problems of this system:

1) Digimotor drive for LH marking reticles were debugged finding deformed switch contacts and shorted terminals as principal problems found. After one damaged digimotor was replaced and circuit faults removed, reticle drive appeared to work reliably. In addition, 90 volt power supply for digimotor was modified for improved square wave form applied to motor.

2) Laser was examined for operation reliability. Trigger voltage level was found a significant factor in successful lamp operation. Therefore, new trigger transformers with increased voltage step-up were installed. Trigger voltage in laser power supply was increased and reduction wiring voltage loss in circuit were incorporated to improve the probability of the lamps to fire. Extensive tests subsequent to these modifications has shown no failure to fire laser.

An additional factor in laser reliability of proper input voltage under certain operating conditions was lacking. The Sola regulating transformer that drives both laser voltage supplies was being momentarily overloaded during simultaneous charge-up of both high voltage supplies while a single supply would operate successfully. To correct this, a new Sola transformer was added so that each high voltage supply is individually powered, and both transformers were relocated for improved ventilation and servicing.

552-552A-OD-328

4) Adjustment of laser optics was improved by addition of (2) rotating wedges in each channel so that an angular compensation of laser output can be made in addition to rotation of crystal itself. This made "tuning in" laser an easier task since it is a "cut and try" operation.

By end April, right channel was marking reliably with 30 second recycle time and average film densities seen at customer's facility.

Debugging work was completed during the first (2) weeks in May, and system was fully accepted by customer, pending resolution of the measurement misunderstanding.

→ Not So!

552A #102

We are waiting action a proposal to repair system.

552 #103

We have been told system has been fully accepted by the customer.

552A #104

Work to finish up plant acceptance of system was completed with shipment delayed because of no space at customer's facility.

In the final stages of work, improvements were added to film guides and motorized drive for smoother travelling of film under all operating conditions. . Broader surfaces now bear against

552-552A-OD-323

film at loop forming slot so that small imperfections of film edge do not propagate easily. The film drive has seen refinement of circuit and mechanism in "power assist" mode so that low speed take off and accurate stopping of film is possible.

The effort to improve vacuum holddown with tighter rear holddown, for better vacuum seal, and drag on spools, for minimizing film spilling, added sufficient loads on film drive motors to cause severe slow down of transport and heating of motor when 500 ft. of 9-1/2" film on take up spool was used. Drive ratios were changed to correct this with no evidence of overheating motor and take up appears to have sufficient torque under worst loading conditions. Take up time for 500 feet is about 3 minutes.

Customer checkout visit notes for 4-17-67 are attached.

Enclosures: 1) Customer visit notes - 4-17-67
 2) Financial Report

WWB:maj